

# Microsoft Azure Architect Design (AZ-304) Practice Test (Sample)

## Study Guide



**Everything you need from our exam experts!**

**This is a sample study guide. To access the full version with hundreds of questions,**

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# Introduction

Preparing for a certification exam can feel overwhelming, but with the right tools, it becomes an opportunity to build confidence, sharpen your skills, and move one step closer to your goals. At Examzify, we believe that effective exam preparation isn't just about memorization, it's about understanding the material, identifying knowledge gaps, and building the test-taking strategies that lead to success.

This guide was designed to help you do exactly that.

Whether you're preparing for a licensing exam, professional certification, or entry-level qualification, this book offers structured practice to reinforce key concepts. You'll find a wide range of multiple-choice questions, each followed by clear explanations to help you understand not just the right answer, but why it's correct.

The content in this guide is based on real-world exam objectives and aligned with the types of questions and topics commonly found on official tests. It's ideal for learners who want to:

- Practice answering questions under realistic conditions,
- Improve accuracy and speed,
- Review explanations to strengthen weak areas, and
- Approach the exam with greater confidence.

We recommend using this book not as a stand-alone study tool, but alongside other resources like flashcards, textbooks, or hands-on training. For best results, we recommend working through each question, reflecting on the explanation provided, and revisiting the topics that challenge you most.

Remember: successful test preparation isn't about getting every question right the first time, it's about learning from your mistakes and improving over time. Stay focused, trust the process, and know that every page you turn brings you closer to success.

Let's begin.

# How to Use This Guide

**This guide is designed to help you study more effectively and approach your exam with confidence. Whether you're reviewing for the first time or doing a final refresh, here's how to get the most out of your Examzify study guide:**

## 1. Start with a Diagnostic Review

**Skim through the questions to get a sense of what you know and what you need to focus on. Don't worry about getting everything right, your goal is to identify knowledge gaps early.**

## 2. Study in Short, Focused Sessions

**Break your study time into manageable blocks (e.g. 30 - 45 minutes). Review a handful of questions, reflect on the explanations, and take breaks to retain information better.**

## 3. Learn from the Explanations

**After answering a question, always read the explanation, even if you got it right. It reinforces key points, corrects misunderstandings, and teaches subtle distinctions between similar answers.**

## 4. Track Your Progress

**Use bookmarks or notes (if reading digitally) to mark difficult questions. Revisit these regularly and track improvements over time.**

## 5. Simulate the Real Exam

**Once you're comfortable, try taking a full set of questions without pausing. Set a timer and simulate test-day conditions to build confidence and time management skills.**

## 6. Repeat and Review

**Don't just study once, repetition builds retention. Re-attempt questions after a few days and revisit explanations to reinforce learning.**

## 7. Use Other Tools

**Pair this guide with other Examzify tools like flashcards, and digital practice tests to strengthen your preparation across formats.**

**There's no single right way to study, but consistent, thoughtful effort always wins. Use this guide flexibly — adapt the tips above to fit your pace and learning style. You've got this!**

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## **Questions**

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- 1. If a company wants to encrypt the disks of virtual machines using BitLocker, what solution should they implement if they have an on-premises HSM?**
  - A. Deploy one Azure Key Vault per region**
  - B. Export a security key from the on-premises HSM**
  - C. Configure to use Azure Storage Service Encryption**
  - D. Use Azure Disk Encryption with a single Azure AD service principal**
- 2. What should be created to notify admins when more than five events are added to the security log of a virtual machine in a short time?**
  - A. two action groups and two alert rules**
  - B. one action group and one alert rule**
  - C. five action groups and one alert rule**
  - D. two action groups and one alert rule**
- 3. How many instances of App1 will remain available during planned maintenance if it is run on seven Azure virtual machines in an Availability Set with three fault domains and twenty update domains?**
  - A. 1**
  - B. 2**
  - C. 6**
  - D. 7**
- 4. Which Azure feature should be recommended to notify group owners about their group memberships every month?**
  - A. Azure AD Identity Protection**
  - B. Azure AD access reviews**
  - C. Tenant Restrictions**
  - D. conditional access policies**

5. Which Azure service can be used to encrypt data while at rest with company-generated keys?

- A. Azure Blob storage
- B. Azure SQL Database
- C. Azure Queue storage
- D. Azure Kubernetes Service

6. If applications need to run in multiple environments without installation dependencies, which hosting solution is most suitable?

- A. Azure Batch
- B. Azure Functions
- C. Azure Kubernetes Service
- D. Azure worker role

7. Which tool is essential for ensuring that SQL Server Integration Services packages can successfully connect to Azure SQL Database instances post-migration?

- A. SQL Server Management Studio
- B. Azure Data Factory
- C. Azure Data Migration Service
- D. Azure DevOps

8. Which service can help identify Azure AD administrative accounts that have not signed in for the past 30 days?

- A. Azure AD Identity Protection
- B. Azure Activity Log
- C. Azure Advisor
- D. Azure AD Privileged Identity Management (PIM)

9. What benefit does Azure Content Delivery Network (CDN) provide for static content in web applications?

- A. Automatic scaling
- B. Data encryption
- C. Minimized latency and faster load times
- D. Cost-effective storage solutions

**10. What solution should be recommended to generate a monthly report of all the new Azure Resource Manager resource deployments in a subscription?**

- A. The Change Tracking management solution**
- B. Application Insights**
- C. Azure Monitor action groups**
- D. Azure Activity Log**

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## **Answers**

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1. A
2. B
3. C
4. B
5. A
6. C
7. B
8. D
9. C
10. D

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## **Explanations**

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**1. If a company wants to encrypt the disks of virtual machines using BitLocker, what solution should they implement if they have an on-premises HSM?**

- A. Deploy one Azure Key Vault per region**
- B. Export a security key from the on-premises HSM**
- C. Configure to use Azure Storage Service Encryption**
- D. Use Azure Disk Encryption with a single Azure AD service principal**

The correct answer in the context of encrypting disks of virtual machines using BitLocker with an on-premises Hardware Security Module (HSM) is to use Azure Key Vault effectively. Deploying one Azure Key Vault per region allows the company to manage their cryptographic keys centrally while also offering enhanced security and compliance features necessary for key management. By setting up Azure Key Vault, which integrates with BitLocker, the company can leverage Azure's capabilities to encrypt and control access to their keys, thus enabling secure encryption of VM disks. This is particularly important in scenarios where the company needs to maintain a secure environment that adheres to compliance requirements, as Azure Key Vault offers secure storage and management for cryptographic keys and secrets. In contrast, exporting a security key from the on-premises HSM would not be the ideal solution since it compromises the hardware isolation that HSMs provide. Configuring Azure Storage Service Encryption does not directly involve BitLocker, as it focuses on data-at-rest encryption rather than specific virtual machine disk encryption which BitLocker handles. Using Azure Disk Encryption with a single Azure AD service principal may not fully leverage the key management and regional strategies that are best practiced for an enterprise-scale scenario, particularly when integrating with an on-premises HSM.

**2. What should be created to notify admins when more than five events are added to the security log of a virtual machine in a short time?**

- A. two action groups and two alert rules**
- B. one action group and one alert rule**
- C. five action groups and one alert rule**
- D. two action groups and one alert rule**

Creating one action group and one alert rule is an effective approach to manage notifications for events in the security log of a virtual machine. An alert rule is essential to define the conditions under which notifications should be sent; in this case, it would be set to trigger when more than five events are logged within a specified timeframe. The alert rule monitors the metrics or logs and assesses when they meet the pre-defined criteria, enabling the system to track specific thresholds or spikes in activity related to security events. The action group serves as a resource that specifies how to respond when the alert rule is triggered. By having one action group, you simplify the notification process, ensuring that when the alert is activated, a single set of actions—such as sending emails, SMS, or triggering webhooks—is initiated. This setup is efficient because it centralizes your actions while keeping the system manageable. In summary, having one alert rule allows you to efficiently monitor the conditions for notification, whereas one action group provides a clear and organized way to handle the notifications once an alert is triggered. This approach avoids unnecessary complexity and maintains clarity in alert management.

**3. How many instances of App1 will remain available during planned maintenance if it is run on seven Azure virtual machines in an Availability Set with three fault domains and twenty update domains?**

- A. 1**
- B. 2**
- C. 6**
- D. 7**

The correct answer indicates that six instances of App1 will remain available during planned maintenance, and this is determined by the concepts of fault domains and update domains within an Availability Set. In Azure, an Availability Set is designed to ensure that VMs are distributed across multiple fault domains and update domains to increase availability and resilience. Fault domains represent the physical separation of underlying hardware, ensuring that VMs do not share the same power source or network switch, thereby reducing the risk of simultaneous hardware failures affecting all instances. Update domains, on the other hand, are logical groupings that allow Azure to perform maintenance on the virtual machines in a staggered manner. In this scenario, with three fault domains and twenty update domains, during planned maintenance, updates are applied to VMs across these update domains in a rolling fashion. The infrastructure ensures that not all VMs in the same fault domain are taken offline at the same time. Given that there are seven instances of App1 spread across three fault domains, at least one instance from each fault domain will remain available during updates. However, since the number of update domains significantly exceeds the number of virtual machines, it allows for many instances to stay online while others are being updated. As a result, with all update domains utilized

**4. Which Azure feature should be recommended to notify group owners about their group memberships every month?**

- A. Azure AD Identity Protection**
- B. Azure AD access reviews**
- C. Tenant Restrictions**
- D. conditional access policies**

The recommended Azure feature for notifying group owners about their group memberships on a monthly basis is Azure AD access reviews. This feature enables organizations to conduct periodic reviews of group memberships, application access, and role assignments within Azure Active Directory. Azure AD access reviews allow administrators or designated group owners to receive insights about who has access to resources and whether that access is still appropriate. By setting up a recurring review process, group owners can be promptly notified about any members added or removed from their groups, ensuring proper access management and compliance. This capability not only enhances administrative oversight but also helps maintain a security posture by ensuring that only the right individuals have access to sensitive resources. Other options do not specifically address the need for regular notifications about group memberships. Azure AD Identity Protection focuses on identifying and responding to potential vulnerabilities and risks related to user accounts. Tenant Restrictions is primarily aimed at controlling access to resources based on the organization's policies, and conditional access policies are used to enforce access controls based on conditions rather than for reviewing memberships. Hence, while all these features play a role in Azure security and management, access reviews are uniquely suited for periodic group membership notifications.

**5. Which Azure service can be used to encrypt data while at rest with company-generated keys?**

- A. Azure Blob storage**
- B. Azure SQL Database**
- C. Azure Queue storage**
- D. Azure Kubernetes Service**

Azure Blob Storage is designed to store massive amounts of unstructured data and comes with built-in capabilities to handle data encryption. When it comes to encrypting data at rest, Azure Blob Storage allows for the use of customer-managed keys (CMK). This means that organizations can generate their own keys and store them in Azure Key Vault, giving them full control over the security and management of encryption keys. This feature is particularly important for organizations with strict compliance requirements or those that want to maintain tighter security over their data. It ensures that even if Azure systems were to be compromised, the data remains encrypted and inaccessible without the appropriate keys. The other services listed, while they may have encryption capabilities, do not offer the same level of flexibility with customer-generated keys as Azure Blob Storage does. For example, Azure SQL Database does support encryption but primarily uses Transparent Data Encryption (TDE) with Azure-managed keys by default. Similarly, Azure Queue storage also supports encryption but primarily relies on Azure-managed keys instead of allowing full control over customer-generated keys. Azure Kubernetes Service is primarily an orchestration platform and does not focus on data storage in the way that would involve at rest encryption like the other services do.

**6. If applications need to run in multiple environments without installation dependencies, which hosting solution is most suitable?**

- A. Azure Batch**
- B. Azure Functions**
- C. Azure Kubernetes Service**
- D. Azure worker role**

The most suitable hosting solution for running applications in multiple environments without installation dependencies is Azure Kubernetes Service (AKS). AKS provides a managed Kubernetes environment where applications can be deployed in containers. Containerization abstracts the application from the underlying infrastructure, allowing it to run consistently across various environments. This encapsulation means that all necessary dependencies are included within the container, eliminating compatibility issues that may arise from different installation environments. With AKS, developers can focus on building and deploying applications while Kubernetes handles orchestration, scaling, and management of containers. This makes it an ideal solution for scenarios where consistent deployment and environment independence are crucial. In contrast, other options such as Azure Batch and Azure Functions have specific use cases that may not fully address the need for running applications in multiple environments without installation dependencies. Azure Batch is designed for processing large volumes of bulk data jobs but does not inherently provide the same level of flexibility across various environments like AKS does. Azure Functions, while great for serverless applications, may not be suitable for complex applications that need to maintain state or require a comprehensive setup. Azure worker roles also cater to cloud services but do not offer the same containerization benefits that AKS provides, making them less ideal for this specific requirement.

**7. Which tool is essential for ensuring that SQL Server Integration Services packages can successfully connect to Azure SQL Database instances post-migration?**

- A. SQL Server Management Studio**
- B. Azure Data Factory**
- C. Azure Data Migration Service**
- D. Azure DevOps**

The selection of Azure Data Factory as the essential tool for ensuring that SQL Server Integration Services (SSIS) packages can successfully connect to Azure SQL Database instances post-migration is based on its specific capabilities tailored for data integration and transformation. Azure Data Factory is designed to facilitate the orchestration and monitoring of data workflows. It provides services that enable the migration of data, including data movement, data transformation, and data load operations into various Azure services. Importantly, Azure Data Factory has built-in support for Azure SQL Database, allowing SSIS packages to seamlessly connect to these cloud-based databases. Furthermore, it includes a rich set of connectors that can easily handle data access and integration tasks across multiple data sources, effectively bridging on-premises and cloud resources. In contrast, other options, while useful in their respective contexts, do not directly address the need to ensure SSIS packages connect to Azure SQL Database instances after migration. SQL Server Management Studio is primarily used for managing SQL Server databases and performing database management tasks, lacking specific features for migrating or connecting SSIS packages to Azure services. Azure Data Migration Service focuses on migrating databases but does not assist with the ongoing execution and management of SSIS workflows. Azure DevOps is geared towards software development and project management rather than data

**8. Which service can help identify Azure AD administrative accounts that have not signed in for the past 30 days?**

- A. Azure AD Identity Protection**
- B. Azure Activity Log**
- C. Azure Advisor**
- D. Azure AD Privileged Identity Management (PIM)**

Azure AD Privileged Identity Management (PIM) is designed to manage, monitor, and control access to important Azure resources. One of its key features is the ability to discover and manage users with administrative roles in Azure Active Directory. PIM helps ensure that only the necessary privileges are granted to users at specific times and can identify privileged accounts that have not been used recently. In the context of the question, PIM enables administrators to view the last sign-in activity of these administrative accounts, allowing them to identify accounts that have not been signed into for specific periods, such as the past 30 days. This feature supports organizations in maintaining a secure environment by uncovering potentially stale or unused accounts, highlighting potential security risks. The other services listed do not serve the same purpose. Azure AD Identity Protection focuses on detecting potential vulnerabilities and risks related to user accounts and does not track sign-in activity specifically. The Azure Activity Log provides insights into operations performed on Azure resources, but it does not provide a report specifically on user sign-in activity. Azure Advisor offers recommendations regarding resource optimization, performance, and security but lacks detailed monitoring of user sign-in behavior.

## 9. What benefit does Azure Content Delivery Network (CDN) provide for static content in web applications?

- A. Automatic scaling**
- B. Data encryption**
- C. Minimized latency and faster load times**
- D. Cost-effective storage solutions**

Azure Content Delivery Network (CDN) significantly enhances the performance of web applications by minimizing latency and ensuring faster load times for static content. By caching static assets like images, scripts, and stylesheets at strategically located edge servers around the world, Azure CDN reduces the physical distance between users and the resources they are accessing. This results in quicker retrieval of content, as users can access data from a nearby server rather than a central location, leading to improved user experience. The ability of Azure CDN to deliver content from edge locations allows it to serve end users with lower latency than if the content were fetched from a centralized origin server. Data is delivered quickly even during high traffic periods, as the load is distributed across multiple edge servers, which also contributes to a more efficient use of bandwidth. While automatic scaling, data encryption, and cost-effective storage are important features in broader aspects of cloud services, they do not specifically encompass the primary advantage of using Azure CDN for static content delivery. The core benefit remains its capability to reduce latency and speed up content loading times, which is critical for maintaining responsive web applications.

## 10. What solution should be recommended to generate a monthly report of all the new Azure Resource Manager resource deployments in a subscription?

- A. The Change Tracking management solution**
- B. Application Insights**
- C. Azure Monitor action groups**
- D. Azure Activity Log**

To generate a monthly report of all new Azure Resource Manager resource deployments in a subscription, utilizing the Azure Activity Log is the most suitable solution. The Azure Activity Log maintains a comprehensive record of all operations and changes made within your Azure subscription, including the creation, modification, and deletion of resources. It provides a robust set of data that can be filtered to view specific activities related to resource deployments, enabling the extraction or export of the relevant events for reporting purposes. This log captures all management operations such as deploying new resources, making it a powerful tool for tracking and auditing Azure resources over time. By querying the Activity Log for specific events such as resource create operations over a designated period, you can effectively compile a monthly report detailing all new deployments. The other options serve different purposes and do not directly align with the requirement of generating a report on resource deployments. For instance, Change Tracking management solutions are more focused on tracking changes to configurations rather than providing an overview of deployments. Application Insights primarily deals with monitoring application performance and usage, while Azure Monitor action groups are used for alerting and automation, rather than tracking resource deployments. Thus, they do not provide the comprehensive, detailed audit logging required to generate the desired monthly report.

# Next Steps

**Congratulations on reaching the final section of this guide. You've taken a meaningful step toward passing your certification exam and advancing your career.**

**As you continue preparing, remember that consistent practice, review, and self-reflection are key to success. Make time to revisit difficult topics, simulate exam conditions, and track your progress along the way.**

**If you need help, have suggestions, or want to share feedback, we'd love to hear from you. Reach out to our team at [hello@examzify.com](mailto:hello@examzify.com).**

**Or visit your dedicated course page for more study tools and resources:**

**<https://az-304.examzify.com>**

**We wish you the very best on your exam journey. You've got this!**

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